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CONGRESS IN SESSION

by Cynthia Smith

104th Congress

- H.R. 393 To prohibit the commercial harvesting of Atlantic striped bass in the coastal waters and the exclusive economic zone.

Introduced January 4, 1995, by Frank Pallone (D-NJ) and referred to the Committee on Resources.

It is unlawful to engage in, or to attempt to engage in, the commercial harvesting of Atlantic striped bass in the coastal waters or in the exclusive economic zone established by Proclamation Numbered 5030, dated March 10, 1983. Any person who is found by the Secretary of Commerce after notice and an opportunity for a hearing in accordance with section 554 of title 5, United States Code, to have committed an act that is unlawful under subsection (a) is liable to the United States for a civil penalty. The amount of the penalty may not exceed \$1,000 for each violation. Each day of continuing violation constitutes a separate offense. The amount of the civil penalty shall be assessed by the Secretary of Commerce by written notice. In determining the amount of the penalty, the Secretary of Com-

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APPOINTING ANIMAL PROTECTIONISTS TO INSTITUTIONAL ANIMAL CARE AND USE COMMITTEES

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Introduction

In 1985, the U.S. Congress passed two laws requiring facilities that conduct biomedical research on animals to establish what later came to be called "institutional animal care and use committees" (IACUCs). These laws were the Health Research Extension Act (HREA) (11) and the Improved Standards for Laboratory Animals Act (ISLA) (10). The ISLA, enacted as part of that year's farm bill, was actually a set of amendments to the Animal Welfare Act (AWA). Both the HREA and AWA amendments mandated that IACUCs review proposals for research and periodically inspect research facilities, among other activities.

In 1986, the Public Health Service (PHS) implemented the HREA by issuing a revised "Policy on Humane Care and Use of Laboratory Animals" (5). The U.S. Department of Agriculture (USDA) implemented the AWA amendments by issuing final regulations in 1989 (13). Thus, research facilities have been legally obligated to operate IACUCs for

several years. A few institutions, anticipating the benefits of having an IACUC, voluntarily established IACUC-like committees long before Congress took action (7).

Both the HREA and AWA amendments stipulated that IACUCs include at least one member who is not otherwise affiliated with the facility. The AWA amendments went further by indicating that the non-affiliated members (NAMs) were to provide "representation for general community interests in the proper care and treatment of animals." Animal protectionists hoped that this mandate would provide a public window into the workings of research laboratories, a step toward both more accountability from researchers and better treatment for animals. In their view, the best candidates for the NAM position are local individuals who already have a track record in animal protection and who could be regarded as representing the research animals, and the public's concern for those animals, rather than the institution itself.

Animal protectionists¹ are not likely to regard NAMs who lack a

¹We use the phrase "animal protectionist" instead of the narrow "animal rightist" to refer to animal advocates who may or may not believe in the philosophy of animal rights and in the complete abolition of vivisection.

track record in animal advocacy as credible watchdogs over the facility's treatment of animals.

On the other hand, many in the research community viewed the NAM mandate as inappropriate, if not punitive. In their view, selecting NAMs should be done with the utmost care, to screen out individuals hostile to animal research who would disrupt meetings, leak confidential information, and commit other transgressions (2, 9).

This clash of views has wound up being decided in favor of the research facilities, which alone are vested with the authority to appoint NAMs and other IACUC members. Thus the community has no say in determining who their committee representative will be.

Very little is known, apart from anecdotes, about the types of individuals being selected to serve as NAMs. The main reason is that facilities usually have tried to keep the identity of their NAMs confidential, reflecting the charged political climate surrounding animal research issues.² From the information that is available, it seems clear that facilities typically have selected individuals not known within their community as advocates for animals (6). This is not to say that the typical NAM has no concern for animal welfare, only that such concern, if present, would not be apparent to outside observers. Thus, individuals in the community who care about the treatment of research animals typically have no reason to believe that the NAM is a strong advocate for animals. These individuals also have no straightforward way of knowing if their concerns are being raised by the NAM.

Of course, some facilities are either more conservative or progressive than the typical scenario described above. Some facilities not only avoid appointing community-based animal advocates to IACUCs and keep the identity of their NAMs confidential, but they go so far as to strain the letter or spirit of the law. They appoint people who are either currently affiliated with the institution in question (see sidebar, page 8) or formerly affiliated (e.g., alumnus, former employee). Some NAMs have been scientists from near-

by research institutions or staff of vivisection organizations.

On the other hand, some progressive institutions have appointed prominent animal welfarists to serve as NAMs. Two of our colleagues at The Humane Society of the United States (HSUS) served as NAMs on IACUCs at large state universities. F. Barbara Orlans identified two institutions that have published policies explicitly calling for community-recognized animal welfarists on their IACUCs, namely, the Wisconsin Regional Primate Research Center (whose policy refers to "advocates of animal rights") and the University of Southern California ("a public member representing the animal advocate community") (6).

It is not difficult to account for the prevailing tendency of research facilities to "play it safe" by appointing NAMs who have no track record in animal welfare advocacy, and to withhold the identities of these individuals from the very people whom they are supposed to represent. At least initially, many scientists resented the call for community representatives to serve on IACUCs (as well as IACUCs themselves). At issue was not only the wisdom of having someone on the committee who was not likely to be a fellow scientist, but also the implication of having an outsider sit on the committee (i.e., couldn't the researchers themselves and their institutional colleagues be trusted?). Moreover, NAMs were not just any outsiders; they were animal welfare watchdogs. Thus, the NAM role has been caught up in the polarization between the animal research and animal protection communities. Some research facilities and individual scientists feel under siege from animal rights activists, and the research community has devoted considerable resources and attention to keeping these activists at bay, such as by enhancing building security. The last thing these facilities and scientists want to do is bring into their IACUC deliberations someone who is considered the enemy, or at least a troublemaker.

A Proposal

It has been several years since most research facilities established

IACUCs. Many researchers and their institutions have come to accept the value of IACUCs in not only helping to ensure the least harm to the least number of animals, but also in helping to improve the scientific quality of proposals, to assure compliance with existing regulations, and to keep the institution's animal care and use program above reproach on animal welfare issues.

Similarly, most researchers and facilities have come to accept the role of NAMs. They recognize that times have changed, the public is concerned about the care and treatment of animals in laboratories, and having NAMs on IACUCs is a small price to pay for continued public support for animal research. Moreover, even though non-scientists may be ill-equipped to grapple with the technical details of research proposals, there is a growing recognition that they can raise fundamental questions that might not otherwise be addressed (9).

At the same time that researchers have come to accept the importance of IACUCs, the hostility between the scientific and animal protection communities has begun to subside. Consequently, some members of each community have begun focusing on areas of common interests, rather than points of disagreement (16).

The time is ripe for research facilities to be less conservative in their appointments of NAMs. In light of the strides being made in bridging the gap between the scientific and animal protection communities, we propose that animal research facilities, as a show of good-will, voluntarily appoint individuals to their IACUC who are recognized within the local community as advocates for animals. We also propose that these individuals be encouraged to serve openly as a liaison between the research community and the concerned public, neither as mouthpieces for the facility nor as spies for local animal activists, but as credible advocates for animals, seeking to function within an imperfect oversight mechanism that has built-in tensions and ambiguities.

We further recommend that facilities appoint at least two such

²It is a little-known fact that the names of the NAMs and other IACUC members are available to the public under the Freedom of Information Act (FOIA). These names are listed on the Animal Welfare Assurances that facilities submit to the PHS. When responding to FOIA requests, the PHS prefers to delete these names, but when pressed, will release them.

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THE WOLF-DOG HYBRID

An Overview of a Controversial Animal

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odicals, and at least two registries are devoted to the breed. Several regional and national wolf hybrid organizations catering to breeders, owners, and enthusiasts have also become established.

As their numbers continue to increase, wolf hybrids have become the center of a growing controversy. A number of attacks on people--mostly children--have resulted in severe injuries and several deaths. Consequently, many people have begun to question whether such animals belong in their communities, or whether they should exist at all.

Despite growing attention, wolf hybrids remain largely misunderstood. Their poorly defined nature and lack of a stable identity have helped fuel the controversy surrounding them.

Background

When considering the wolf hybrid, one cannot avoid discussing both the wolf and the dog. It is commonly accepted that the modern dog resulted from the domestication of the wolf, a process that began 12,000 to 15,000 years ago. Until this century, there has been little further interest in cross-breeding the two species.

It is likely that wolves and dogs have sporadically interbred in nature for as long as both species have coexisted. Most matings probably occurred between roaming or feral dogs and wolves living apart from a pack.

The offspring from such matings may have posed a hazard to the human communities near where they lived. After studying numerous historical and modern accounts of wolf attacks on humans, the Canadian naturalist C.H.D. Clarke concluded that most attacks involved either rabid wolves or hybrids.

One such event may have occurred in the Cevennes region of south central France between the years 1764 and 1767, when about 100 people were

attacked and at least 64 killed by what was described as a pair of savage wolves. Most of the victims were children. These animals came to be known in local lore as the "beasts of Gevaudan." After being hunted and killed, it was found that the male weighed about 140 pounds and the female about 110 pounds; these weights were unusually high for the local wolf population. Their marked aggressiveness and other described physical attributes have led to speculation that these two animals may have been wolf hybrids, perhaps siblings born from the breeding of a wolf with one of the large dog breeds commonly kept by farmers in the region.

Physical Characteristics

Wolf hybrids have been known to exhibit physical characteristics of both the wolf and dog in differing combinations and to varying degrees. Though closely related, there are a number of anatomical and physiological differences between the two species.

Wolves generally weigh between 80 and 100 pounds, with females weighing less than males. An unusual wolf may reach 150 pounds or more. They have slim torsos with narrow chests, long legs with large feet, and large heads with larger teeth and more powerful jaws than those of the dog. Their coat varies with the seasons; it is very thick with a dense undercoat in the winter and sheds to a thinner, shorter haired coat in the summer. Coat color varies from all black to a grizzled gray to all white. The eyes are usually a yellowish golden color.

Dogs come in a variety of sizes, shapes, and colors that vary greatly with the breed. The malamute and husky closely resemble the wolf in appearance, making them the dog breeds most preferred for hybridization.

Wolves are seasonal breeders and generally have two to four pups per litter. Dogs are nonseasonal breeders

The wolf has had an influence on the culture, art, and lore of human societies since before historical times. A traditional fear of wolves is deeply ingrained in many cultures, where they are often regarded as fearsome predators, not only of wildlife but also of humans and livestock. Such perceptions have resulted in wolves being hunted to extinction in many parts of the world where they once were plentiful.

In American culture, the image of the "big, bad wolf" has been pervasive. This view has been changing over the past few decades as reports from naturalists studying both wild and captive wolves have dispelled many of the myths and misconceptions surrounding these animals.

Changing perceptions have resulted in an increased interest in wolves and things related to them. Chief among these has been the growing popularity of the wolf-dog hybrid, more commonly referred to as the wolf hybrid.

A wolf hybrid is the offspring of a breeding between a wolf (*Canis lupus*) and a dog (*Canis familiaris*). Breeding is possible since wolves and dogs are closely related genetically.

Though estimates vary, the current population of hybrids in the United States has been reported to be around 300,000. Growing interest in them has led to a proliferation in the number of wolf hybrid breeders, with many profiting from the breed's increasing popularity.

In addition, a small but energetic industry has sprung up around the animal. A number of publications, peri-

and generally have larger litters than wolves.

Because of the range of possible variations, there is no general description that can be made of the wolf hybrid. They are often larger in size than either the wolf or dog from which they were bred, a phenomenon termed "hybrid vigor." Though most high-percentage hybrids often retain much of the physical appearance of the wolf, many hybrids are indistinguishable from dogs in appearance.

Breeding and Genetics

Although most breeders raise hybrids to sell to the public, there is a small group of breeders and enthusiasts seeking to establish a new and distinct breed of canine. Their long-term goal, as described by one well-known breeder, is to obtain an "ideal... a wolf/dog cross strongly and attractively resembling its wolf counterpart visually, slightly aloof and territorial, but easily managed by its owner" (Dorothy Prendergast, *The Wolf Hybrid*, p.6). While most breeders would readily agree with this ideal, not all agree on the means to achieve it.

Theoretically, a wolf hybrid can result from the mating of a wolf with any breed of dog. Wolves have been bred with such diverse breeds as malamutes, Siberian huskies, German shepherds, rottweilers, collies, pit bulls, and even standard poodles.

The initial mating most commonly occurs between a male dog and a female wolf, though the opposite mating can also occur. The offspring produced from such a mating are first generation, or F₁, hybrids. F₁ and subsequent hybrids can then be bred with other hybrids, with pure wolves, or with the same or different breeds of dog, resulting in a group of hybrids with a wide range of genetic makeup.

This genetic makeup is most often represented as a percentage, a number which is presumed to be a measure of the amount of wolf blood in the animal. The percentage not only represents the lineage of a hybrid, but is often used to determine its selling price as well.

When advertised for sale, hybrids are often described by a baffling array of percentages that purport to accurately represent the amount of wolf blood in the animal being sold. There is no uniformity amongst breeders in the way

these percentage figures are determined, and a breeder can assign percentages to their animals by using several different methods. The most common, which may be termed the "pedigree method," is to add together the "known" percentages of wolf in the two parents and divide the sum by two to get the percentage of wolf in the offspring. Thus, when a pure (100 percent) wolf is bred to a pure (0 percent) dog, the offspring, an F₁ hybrid, will be 50 percent wolf. If this F₁ is then bred to another pure wolf, the result would be a 75 percent hybrid.

The pedigree method is considered by most breeders to be the only ethical way of calculating percentages, but it is not the only method used. A few breeders assign percentages to their hybrids based on the animal's physical appearance, others use systems known only to themselves, and some use any percentage that will fetch a decent selling price.

Although there is much discussion of percentages in wolf hybrid circles, few understand what these numbers actually mean. To most breeders and owners, they represent the exact "wolf content" of their animals. Unfortunately, the biological mechanisms and events that govern the inheritance of genetic material--and the resulting statistical complexities--cannot be accurately represented by the simple formula of the pedigree method. The inaccuracy of these percentages becomes apparent when one examines the genetics of hybridization.

Wolves and dogs each have 78 chromosomes arranged into 39 pairs. Wolves are physically different from dogs because they have a number of genes located on these chromosomes, coding for wolf characteristics, that dogs do not have. But which genes differentiate a wolf from a dog? How many are they and on which chromosomes are they located? Unfortunately, the answers to these questions are not currently known.

Using the pedigree method, each pup in a given litter would be assigned the same percentage of wolf blood. Yet no two pups in that litter have the identical genotype, unless they are identical twins. This is easily demonstrated by noting the differences in physical appearance, or phenotype, amongst the pups. Some will be more wolf-like than others. These phenotypic differences

reflect the differences in their genotypes.

One complicating factor in determining accurate percentages results from the close biological relationship of wolves to dogs. As previously stated, wolves are recent ancestors of the domestic dog. Though not identical, the genotypes of wolves and dogs are very similar. It is probable, in fact, that 99 percent or more of the genotypes of these two species are indistinguishable. (Consider that 98 percent of the genotypes of humans and chimpanzees are indistinguishable.) The large majority of wolf genes that enter into pedigree percentage calculations are, therefore, identical to the corresponding dog genes.

There may be as few as several hundred genes in a genotype containing more than a 100,000 genes that differentiate the wolf from the dog. But the locations of these genes on the various chromosomes are unknown. They may be located on all or only a few of the 39 chromosome pairs, making it unlikely for them to be evenly distributed between daughter cells following the random separation of chromosomes that occurs during meiosis.

With current knowledge and technology, it is not possible to accurately determine the percentage of wolf genes in a wolf hybrid. Therefore, although they do not accurately represent the "wolf content" of an individual hybrid, the percentages assigned to wolf hybrids by the pedigree method may still have some value. Pedigrees are a traditional way of determining ancestry in human lineages as well as animal breeding. These percentages, if honestly assigned and accurately calculated, can be used to depict the breeding history and ancestry--the pedigree--of the individual animal. Since there is no way of accurately calculating the percentage of wolf genes in a hybrid, it may still be the best method currently in use to describe an individual hybrid.

Behavior

Much of the controversy over wolf hybrids centers around their behavior. Unfortunately, there is little scientific literature on the subject. Most of what we now know about their behavior comes from anecdotal accounts found

in news stories, magazine articles, and reports from individuals.

The absence of an objective behavioral study of this animal has contributed to the wolf hybrid controversy, and most opinions of their behavior can be readily divided between two opposing camps. One side describes them as being highly aggressive, destructive, unpredictable, and untrustworthy around humans, especially children. The other sees them as gentle, playful, intelligent, and loving animals, similar to the dog in their relations with people. In fact, many experienced hybrid owners claim that their animals are less dangerous than some breeds of dogs. Adding to the confusion, national statistics on canine attacks on humans compiled by the Centers for Disease Control and Prevention (CDCP) have been used by both sides to support their differing positions.

Even without a formal study, many aspects of hybrid behavior can be extrapolated from the known behaviors of dogs and wolves. Research has shown that many of the behavioral traits of these two animals are inherited, and their basic behavior patterns are fairly predictable.

Although anatomical differences between wolves and dogs are slight, the most notable difference between the two species is their behaviors. Animal behaviorist Michael W. Fox has described the domestic dog as a wolf with no behavioral patterns added, but with some patterns modified or reduced. As an example, the behavior of a wolf following a challenge or threat display is highly predictable. Similar displays by a dog, especially when directed toward a human, are much less predictive of the dog's ensuing behavior. This is a result of the modification of the social behavior patterns of dogs that occurred during domestication.

There are many other behavioral differences between wolves and dogs. Wolves in the wild appear to fear humans and will avoid contact whenever possible. (Wolves raised in captivity are not as fearful of humans. This suggests that such fear may be learned

rather than inherited.) Dogs, on the other hand, socialize quite readily with humans, often preferring human company to that of other dogs. Wolves are tremendously successful hunters. Most dogs would quickly starve to death if left to fend for themselves in the wild. Additionally, wolves rarely bark, something obviously not true for most dogs. Since wolf hybrids are genetic mixtures of wolves and dogs, they can inherit a

predicted with anything near the certainty of dog pups. Thus, though the behavior of an individual wolf hybrid may be predictable, the behavior of the breed as a whole is not.

Their aggressive tendencies and attacks on humans have caused many people to have concerns about wolf hybrids. Some question whether they are as dangerous as many claim. When CDCP statistics on canine attacks are used to compare hybrid attacks to those committed by various breeds of dogs, hybrids appear to be no more dangerous than some of the more aggressive dog breeds. But, these statistics may be misleading since they only list the number of attacks by breed without taking into account breed population figures or circumstances surrounding the attacks.

Some insight into hybrid aggressiveness can be attained by looking at aggression in wolves and dogs. Wolves are relatively non-aggressive animals. Fighting amongst pack members is detrimental to the pack's survival, and aggressive behavior has been selectively inhibited in the wolf during its evolution. However, aggression in wolves can be part of territorial or protective behavior, but is most commonly seen during social posturing within the pack. This type of aggression often appears to be unprovoked, and is an attempt to establish or maintain dominance over a subordinate animal. The majority of human bites by captive wolves have occurred during dominance challenges. Wolves in captivity, though, rarely kill humans.

Dogs are more aggressive than wolves, because they were not subject to the same selective pressures as the wolf. In addition, a number of dog breeds were developed specifically for their fighting ability and aggressive tendencies.

Aggressive behavior in the wolf hybrid is variable. The degree of aggressiveness appears to be related to the percentage of wolf and breed of dog in the hybrid. High-percentage



A 2-year-old, high percentage wolf-dog hybrid.
(Photo by R. Willems)

range of behavioral traits, some of which may be conflicting.

This mixture of potentially conflicting genetic traits results in less predictive behavior patterns in the wolf hybrid, compared to either the wolf or dog. This is not to say that the behavior of a specific hybrid is unpredictable or erratic. It would, however, be unlikely that someone unfamiliar with a particular hybrid, even someone with considerable experience, would be able to predict that animal's behavior with reasonable certainty. The adult behavior of hybrid pups also cannot be

hybrids tend to show the decreased aggressiveness of the wolf. There is an account of an auto junkyard owner who bought a high-percentage hybrid, thinking it would make a good guard dog. Rather than guarding the property, the animal instead would often hide behind the stacks of old cars whenever a person would enter the yard.

Some hybrids can be more aggressive than the dog. Aggressive hybrids usually come from breeding with aggressive dog breeds, such as pit bulls or rottweilers.

Though animal attacks on humans are often attributed to aggressiveness, some attacks can be related to predatory behavior. Aggression is often confused with predation, but the two are distinctly different. Both wolves and dogs exhibit predatory behavior, but the wolf is the far superior hunter.

There are differences in the predatory instincts of dogs and wolves. Wolves in the wild will occasionally prey on humans, though rarely and only under unusual circumstances. Predatory behavior of dogs toward humans has been greatly suppressed by domestication.

When considering predatory attacks on humans, an awareness of the relationship between a predator and its prey is critical. A prey animal often gives certain signals to the predator that stimulate its predatory impulses. Some of these signals, such as fleeing or signs of injury, are easy for us to recognize. There may be a number of additional signals that go unnoticed by human observers, which are recognizable to the predator. This concept is important in understanding attacks by predatory animals on humans.

Most attacks by wolf hybrids have been on small children. Many occurred when the animal's predatory instincts were triggered by some unwitting behavior by the child, causing the hybrid to regard the child as prey. In several instances, hybrids have even attacked children that they have played with repeatedly in the past.

In some hybrids, the timidity of the wolf may be replaced by the aggressiveness of the dog, while the predatory contribution from the wolf ancestry may remain relatively intact. Thus, hybrid attacks on humans can be related to both the aggressive tendencies

of the dog and the predatory nature of the wolf.

Social behavior is also important to both the dog and wolf. The wolf has a complex social structure centered around establishment of the pack. Dominance behavior is an important part of establishing the social hierarchy of the pack, and the dominance of higher ranked animals is constantly being challenged by their subordinates. The social environment of the dog is centered around its association with humans, with all humans, in general, being dominant to the dog. Wolves do not socialize with humans in the same way as dogs do, however. Captive wolves usually regard humans simply as other wolves in the pack, and challenges to the "alpha" human are not uncommon.

In hybrids, where the aggressive nature of the dog may be coupled with an absence of the wolf's aggressive restraint, serious injury or even death to a human can result during a dominance challenge. Hybrids having strong natural dominance tendencies may be particularly dangerous.

There are other troubling aspects of wolf hybrid behavior. Hybrids are often unsuitable in the home environment. Many retain the natural tendency toward destruction that makes the wolf such a poor house pet. Wolves are very curious animals by nature, and may destroy such large items as sofas, tables, and cabinets while attempting to satisfy their curiosity. They are also notoriously difficult to housebreak. Outdoors, wolves are excellent diggers, and can burrow as much as 6 feet underground, destroying yards and defying many poorly conceived attempts to keep them confined. Many hybrids retain these wolf-like behaviors, making them particularly undesirable as pets.

Ownership of Wolf Hybrids

There is a mystique surrounding the ownership of a wolf hybrid. Those unfamiliar with it often wonder why anyone would want to own one of these animals. Most owners purchase their hybrids as companion animals. Many do so out of a desire to own an animal that is unusual and possesses a "feel of the wild."

Most people have very little knowledge of wolf hybrids before they purchase one. Disreputable sellers

may provide the buyer with erroneous, little, or no information on care and housing for the animal. In fact, the true nature of the hybrid may be purposely misrepresented by the seller in order to assure a sale. As a result, many owners quickly become disillusioned when the cute pup they purchased matures and becomes unmanageable, destroying their home, digging out of the yard, and becoming a nuisance in the neighborhood or a menace to their children.

Of course, there are many owners who love their hybrids and enjoy ownership. These owners are usually those who have taken the time to learn about their animal and realize that a wolf hybrid can not be treated as just another dog. The satisfied owner is one who is willing to provide the housing necessary to properly maintain such an animal, and not to chain it up out in the yard when it is no longer suitable for living in the house. Most responsible owners house their animals in enclosures similar to those used to house wolves. Such housing generally increases the cost of ownership, and the less responsible owner commonly opts for substandard housing in an attempt to save money.

Wolf hybrid breeders generally advertise their animals for sale through advertisements in newspapers, periodicals, and newsletters. They sell for prices ranging from \$100 to as much as \$1,500. Such prices are a major cause of the recent proliferation in the number of wolf hybrid breeders. Although most breeders are honest in the sale of their animals, there is a good deal of fraud in the wolf hybrid trade. It is not unusual for a large mixed breed dog with no wolf blood at all to be sold as a wolf hybrid for a large amount of money. Additionally, few wolf hybrid breeders own or have access to a pure wolf. After several generations without the infusion of new wolf blood, the genetic makeup of the hybrids from such a kennel would be extremely confused.

Animal Control and Legal Issues

Regulation of wolf hybrids varies greatly in different parts of the country. Federal Animal Welfare Act regulations define hybrids as domestic animals, and they are regulated as are other dogs. Several States require per-

mits to keep hybrids, a few States prohibit their possession, and many States do not regulate them at all.

Hybrids can pose perplexing problems for local animal control agencies. The question of jurisdiction is often unclear. Local animal control ordinances are often written exclusively for dogs. Most State wildlife agencies do not regard wolf hybrids as wildlife even though the animals may be legally defined as being wild or exotic. As a result, many hybrids may not be regulated by any local statute, making troublesome animals and owners a difficult problem for their communities.

Yet another problem for animal control agencies is the difficulty in identifying an animal as a wolf hybrid.

There is no test currently available that will differentiate a hybrid from a dog or a wolf. Animal control agencies often must rely solely on the word of the owner in determining whether or not an animal is a wolf hybrid. Recently developed techniques, such as genetic probing, hold some promise as possible methods of identification, but no work is currently being done with regard to wolf hybrids.

Many animal shelters have had difficulties dealing with hybrids. Aside from housing and handling concerns, adoption to the public has proven to be risky. In 1988, a wolf hybrid was adopted from a humane society shelter in Florida. Several hours after it was taken home, it escaped from its new owner's fenced yard and killed a neighbor's 4-year-old boy. The shelter was sued and paid \$425,000 in a settlement to the child's parents. Since this incident, shelters around the country have been reluctant to put these animals up for adoption. Instead, the animals are euthanized once the required holding period is over.

Rabies vaccination for wolf hybrids is yet another difficult issue. Although it is likely that current rabies

vaccines are as efficacious in the hybrid as they are in the dog, Federal regulations require that any vaccine be tested in a species before it can be approved for use in that species. Due to the expense, no such testing has ever been done on either wolves or hybrids. Regardless, many hybrids have been vaccinated with canine rabies vaccine. Such vaccinations are not officially recommended or recognized, and in some States may even be illegal. Consequently, hybrids that have bitten someone are often treated differently than a dog would be. In many cases the hybrid must be destroyed and the brain examined, regardless of whether or not it was vaccinated for rabies.

In some States, veterinarians have

are prohibited in the State in which the incident occurred.

Conclusion

The wolf hybrid is quickly growing in popularity in the United States. Those who own and breed wolf hybrids defend them as being a viable alternative to the dog for those who want a more exotic pet. Others regard them as potential "time bombs" ready to go off unexpectedly, injuring the owner or some unsuspecting person. The latter would like to see their breeding and sale prohibited. Many more are becoming concerned as the problems associated with these animals increase and more incidents occur.

Discussions of wolf hybrids often become heated emotional exchanges between opposing parties, each with their own sets of data, statistics, and information. Despite opposition and attempts at regulation, the wolf hybrid population continues to increase as a result of continued demand for the animal by a certain segment of the public. Whatever opinion one has, the presence of wolf hybrids has forced more and more communities to become embroiled in the controversy that continues to surround these animals.



A female, high percentage wolf-dog hybrid. (Photo by R. Willems)

had legal problems as a result of treating wolf hybrids in their practices. Recently, a veterinarian in New Jersey was sued and found liable for damages after a wolf hybrid he had treated later bit someone. To further complicate matters, veterinarians may find that their malpractice insurance does not offer coverage in a suit involving a wolf hybrid, if the hybrid has no permit or is owned illegally. The American Veterinary Medical Association recently issued a statement saying that their malpractice insurance carrier would not cover suits involving wolf hybrids if the animal's owner has no permit in a State that requires one, or if hybrids

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IACUCs cont'd from p.2

animal protectionists to their IACUCs, so that when one cannot attend a particular meeting, the other can be present. In Orlans' recent survey of 10 IACUC chairpersons, half of the respondents indicated that "non-attendance of their community member had been a real problem and most [chairpersons] expressed dismay at this" (6, p. 114). In light of this problem, which seems inevitable to a greater or lesser extent, complying with the spirit of the AWA for community representation all but necessitates having two or more NAMs.³

Some community-recognized animal advocates may be students or employees of their local research facility, and would thereby be affiliated with the institution. Such institutions are free to appoint these advocates to their IACUC (though not as NAMs); however, because of conflict of interest, this would not provide the kind of community representation that we are proposing.

Federal law does not require that IACUCs include individuals who have demonstrated their care and concern for animals in the local community.⁴ However, Congress gave NAMs a unique role by stipulating that they represent general community interests in the proper treatment of animals. To be sure, all IACUC members can be considered as advocates for the institution's research animals by virtue of serving on the committee. However, only the NAM's role is linked to community representation and is free of the potential for conflict of interest due to affiliation with the institution.

Unfortunately, the legislative history of the 1985 amendments to the AWA does not shed much light on what motivated Congress to stipulate a role for community representatives in IACUC activities. Clearly, however, Congress believed it was important to open up IACUC deliberations to input and scrutiny from individuals who had no vested interest in the research facilities in question. Moreover, that input and scrutiny were intended to have a certain orientation, i.e., to help ensure the proper treatment of animals. What better way to ensure this, and to embrace the spirit of the AWA amendments, than to fill this role with someone who not only has care and concern for animals, but who also has a track record of animal welfare activity in the community and is willing to serve openly as the community's representative on animal welfare concerns?

³The influence of even two NAMs would be diluted in large committees. In such cases, facilities should appoint NAMs in numbers sufficient to maintain the balance among IACUCs members implied in the congressional legislation.

⁴The AWA does require a minimum of one NAM and two affiliated members, one of whom must be a veterinarian. The PHS policy calls for a minimum of one NAM and four affiliated members, including a veterinarian with training or experience in laboratory animal science and medicine, a practicing scientist experienced in animal research, and a member whose primary concerns are in a non-scientific area, for example an ethicist, lawyer, or member of the clergy.

MILITARY IACUCS AND ANIMAL PROTECTIONISTS

The House Armed Services Committee (HASC) held an oversight hearing on the military's animal research programs in April 1992. As a result of that hearing, the HASC requested that the Department of Defense (DoD) appoint bona fide animal protectionists to military IACUCs (12). The HASC held a follow-up hearing in April 1994, in which the military provided no evidence of having implemented this recommendation. In fact, the DoD Inspector General found that over one-third of the DoD facilities in question had non-affiliated members (NAMs) who were actually affiliated with the institutions, and nearly another third had "definite ties to the research industry" (1).

The HASC is considering its options on this matter. In the meantime, Congressman Robert Torricelli (D-9th-NJ) introduced a bill in the House of Representatives on August 16, 1994, that would legally mandate that military IACUCs include local animal protectionists. The bill, the Animal Experimentation Right to Know Act, is expected to be reintroduced in 1995.

Although Congress is currently limiting its concerns about IACUCs to the military, we think this may change if the broader scientific community continues to exclude animal protectionists from IACUCs.

Although Congress is currently limiting its concerns about IACUCs to the military, we think this may change if the broader scientific community continues to exclude animal protectionists from IACUCs.

Skeptics may view our proposal as either hopelessly naive given the persistent controversy over animal research, or as a thinly veiled attempt to subvert the IACUCs' workings. We argue below that appointing animal advocates to IACUCs and having them be a bridge between the research facility and concerned public, when carried out with common sense, engenders little risk but has significant benefit.

Advantages of Appointing Animal Protectionists to IACUCS

All positions on IACUCs, including the NAM, should be filled only after careful deliberation. We recognize that facilities will want to be especially careful if they choose to appoint individuals who have a track record for animal advocacy within the local community. These facilities will no doubt seek to appoint pragmatists willing to work within the system, individuals who can be challenging without being combative or obstructionist. As long as these qualities are satisfied, it matters little whether or not these individuals support the use of animals in research or are simply resigned to the inevitability of such research.⁵

Why should research facilities buck the current trend by appointing to their IACUCs individuals known for their work on behalf of animals? There are a number of overlapping reasons:

- to follow the spirit of the AWA
- to gain advice not only from a different (non-institutional) perspective, but from a statutorily relevant perspective (animal welfare)
- to enable at least one person on the IACUC to see his/her role exclusively as an advocate for the research animals
- to be discouraged from undertaking proposed projects that would stretch the limits of public acceptance
- to demonstrate a willingness to be open to outside scrutiny
- to engender good community relations
- to educate animal advocates about the research process
- to lessen the polarization between the animal research and animal protection communities

Potential Pitfalls

We recognize that many supporters of animal research are likely to see potential for more harm than good from appointing animal protectionists to IACUCs. In this section, we identify and address several counterarguments to the current proposal.

- "All we'll gain are ideological, combative, naysayers who will disrupt our meetings."

One of the roles of NAMs is to raise questions about the care and use of animals that otherwise might not arise during committee deliberations. If this is done in a consistently disruptive manner, then the offending individual should be replaced, as should any member who prevents the committee

from carrying out its mandated functions. Fortunately, this situation should be precluded by careful selection of NAMs.

- "*Open, frank discussion will be stymied by the presence of individuals with ties to the animal protection community.*"

This may be true initially but should subside with time, as NAMs demonstrate their commitment to working within the IACUC system. Case histories have already borne this out (6).

- "*Meetings will bog down in ceaseless probing of animal welfare minutiae.*"

We believe that NAMs will quickly learn what the key issues are and concentrate on these, rather than on less salient features of protocols.

- "*Animal protectionists will leak confidential information and pose a security risk.*"

Any IACUC member could use information gained from committee service to bring unwelcome scrutiny to an institution, and we recognize that this concern would be particularly applicable to NAMs who were animal advocates. However, this is another situation that should be precluded by careful screening of NAM candidates. In addition, NAMs probably are a minimal security risk given that they typically do not have unrestricted access to animal quarters. Moreover, concern over IACUC members leaking trade secrets is largely misplaced given that this activity is illegal under the AWA and that there is no need to put such secrets in protocols.

- "*Some institutions have tried this in the past and it hasn't worked out.*"

Although research facilities typically have not appointed animal protectionists to IACUCs, they have occasionally done so. There have been isolated cases in which animal activists have been appointed to IACUCs only to be dismissed or to resign after relations become strained (4). The reasons behind these occurrences differ from case to case. On the other hand, there have been other cases of such arrangements proving to be practical and productive (6).

- "*Even if this person works out well, he/she is likely to be pestered by animal rights crazies.*"

Community representatives serving on IACUCs should be willing to communicate with any member of the community who has concerns about the care and treatment of the animals at the facility in question. Individuals who feel they don't have the time or patience to be a true community representative should not seek appointment as a NAM.

An additional counterargument to our proposal may be advanced by critics unfamiliar with IACUCs in practice, namely, that animal protectionists will prevent meritorious research from being approved. Most IACUCs operate on a simple majority vote; when this is the case, no one person can block a proposal.

In light of the nature of the potential problems, we conclude that facilities face little risk if they exercise common-sense precautions in implementing the current proposal.

⁵Individuals who fit this overall profile and are considering service as an NAM should themselves deliberate carefully. Some of the animal advocates who have served as NAMs have described their experience using words such as "miserable," "anguish," and "stressful" (15). Individuals should think twice before putting themselves in a situation in which they are going to experience such emotions.

Concluding Remarks

Our proposal for animal protectionists to be appointed to IACUCs is consistent with a community relations function that many IACUC chairpersons apparently envision for their NAMs. In Orlans' survey of IACUC chairpersons, mentioned above, a "good many mentioned that the community member's presence was to provide assurance to the community that all animal experiments were appropriate and necessary and deserved community endorsement" (6, p. 113). Surely, however, the mere existence of the NAM slot on IACUCs is not enough to provide a meaningful assurance. Rather, such assurances would be more credible if the NAMs had a history of animal advocacy and if they served openly as a liaison between the facility and the community.

We have argued above that our proposal is consistent with, but not mandated by, national policy in the United States. However, national policies in Germany, Denmark, and Switzerland explicitly call for representation from animal welfare groups on regional or national committees that oversee animal experimentation (6). Moreover, Australian policy calls for at least one person who is an animal welfarist to serve on that country's equivalent of the IACUC; the official description of that member parallels the current proposal almost exactly:

A person with demonstrable commitment to, and established experience in, furthering the welfare of animals, who is not employed by or otherwise associated with the institution, and who is not involved in the care and use of animals for scientific purposes. The person should where possible be selected on the basis of membership of an animal welfare organization....(3)

This policy has reportedly caused no major difficulties (8).

What is the likely impact of facilities implementing the current proposal? Orlans' informal survey of 16 former NAMs, all of whom were animal advocates, provides some measure of the limited but important effect (6). She concluded:

They [the animal protectionist NAMs] must be satisfied with having only moderate or minor impact on the committee and seeing only occasional disapprovals of protocols. Their overall impact of contributing balance and some measure of public accountability to the proceedings must suffice (p. 111). A commonly stated opinion among the survey respondents was that the value of being a community member lies not so much in the specific reforms effected but in being a constant reminder to the institution of the outside world (p. 112).

HSUS board member Robert Welborn reported that his own IACUC experience was emotionally trying, but he felt it was nonetheless important for animal protectionists to seek appointment to IACUCs and to work within the system (14, 15).

Institutions that decide to appoint local animal protectionists to their IACUCs face the task of identifying suitable candidates. The HSUS stands ready to help. Indeed, the HSUS has already contacted a number of universities throughout the country, offering our assistance. Other potential sources of help include local, regional, or national humane societies/animal protection organizations, as well as campus-based organizations, which may know of suitable non-affiliated candidates.

In conclusion, we encourage research institutions to appoint local animal protectionists to their IACUCs and to have these individuals serve as a liaison to the community on matters relating to the institutions' care and treatment of animals in research. We believe such individuals, when carefully chosen, offer a number of advantages and pose little risk.

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Legislation cont'd from p.1

merce shall take into account the nature, circumstances, extent, and gravity of the prohibited act committed and, with respect to the violator, the degree of culpability, any history of prior violations, ability to pay, and such other matters as justice may require.

Any vessel (including its gear, equipment, appurtenances, stores, and cargo) used, and any fish (or the fair market value thereof) taken or retained, in any manner, in connection with, or the result of, the commission of any act that is unlawful under subsection (a), is subject to forfeiture to the United States. All or part of the vessel may, and all such fish (or the fair market value thereof) shall be forfeited to the United States under a civil proceeding described in paragraph (2). The district courts of the United States have jurisdiction over proceedings under this subsection. Section 6 of Public Law 100-589 (16 U.S.C. 1851 note) (regulations governing fishing for Atlantic Striped Bass) is repealed.

- **H.Con.Res. 7 A resolution expressing the sense of the Congress that any Federal agency that utilizes the Draize rabbit eye irritancy test should develop and validate alternative ophthalmic testing procedures that do not require the use of animal test subjects.**

Introduced January 4, 1995, by Andrew Jacobs (D-IN) and referred to the Committee on Commerce.

- **H. R. 264 To amend the Poultry Products Inspection Act to require the slaughter of poultry in accordance with humane methods.**

Introduced January 4, 1995, by Andrew Jacobs (D-IN) and referred to the Committee on Agriculture. This act may be cited as the "Humane Methods of Poultry Slaughter Act of 1995."

Section 7 of the Poultry Products Inspection Act (21 U.S.C.456) is amended such that effective one year after the date of the enactment of this subsection, poultry shall be slaughtered in an official establishment referred to in subsection (a) only in accordance with one or both of the following humane methods: (1) Poultry are rendered permanently unconscious by an electrical, chemical, or other method that is rapid and effective before or immediately after the

poultry are shackled or otherwise prepared for slaughter; or (2) Poultry are slaughtered in accordance with the ritual requirements of the Jewish faith or any other religious faith, as described in section 2(b) of Public Law 85-765 (7 U.S.C. 1902(b)).

- **H. R. 353 To prohibit the export of American black bear viscera, and for other purposes.**

Introduced January 4, 1995, by John Porter (R-IL) and referred to the Committee on Resources and, in addition, to the Committees on International Relations and Ways and Means. This act may be cited as the "Black Bear Protection Act of 1995."

The Secretary of Commerce shall exercise the authorities the Secretary has under the Export Administration Act of 1979 to prohibit the export of American black bear viscera from the United States.

The Secretary of the Interior, in consultation with the Secretary of the Treasury, shall prepare and submit to the Congress, not later than 180 days after the date of the enactment of this act, a report that describes - (1) the effectiveness of the computerized information system or any other system of the Fish and Wildlife Service or the United States Customs Service that records data on the importation or exportation of wildlife body parts, specifically of the American black bear, to and from the United States; and (2) any plans of the Fish and Wildlife Service to monitor the illegal movement of, or commercial activity in, American black bear viscera or other American black bear body parts.

The United States Trade Representative shall discuss the issues involving trade in American black bear viscera with the appropriate representatives of those countries trading with the United States who are determined jointly by the Secretaries of Commerce and Interior to be the leading importers of American black bear viscera.

As used in this act, the term "American black bear viscera" means the gall bladder or any internal organs of an American black bear (*Ursus americanus*).

- **H.R. 263 To amend the Animal Welfare Act to require humane living conditions for calves raised for the production of veal.**

Introduced January 4, 1995, by Andrew Jacobs (D-IN) and referred to the Committee on Agriculture.

The Animal Welfare Act (7 U.S.C. 2131 et seq.) is amended to include the following new section: Section 29, Protection of Veal Calves. This new section requires the following humane living conditions: Beginning one year from the date of enactment, no person shall raise a calf for the production of veal unless... (1) the calf is free to turn around without difficulty, lie with its legs outstretched, and groom itself, without any impediment such as too small an enclosure or chaining or tethering; and (2) the calf is fed a daily diet containing sufficient iron and, if the calf is more than 14 days old, sufficient digestible fiber to prevent anemia and to sustain full health.

For purposes of enforcement of this section, the Secretary [of Agriculture] may make such investigations or inspections as the Secretary considers necessary of any facility where calves are kept for the production of veal. Section 16 of this act shall apply with respect to investigations and inspections conducted under this section.

- **H.R. 238 To provide for the protection of wild horses within the Ozark National Scenic Riverways and prohibit the removal of such horses.**

Introduced January 4, 1995, by Bill Emerson (R-MO) and referred to the Committee on Resources. This act may be cited as the "Ozark Wild Horses Protection Act."

The act entitled "An act to provide for the establishment of the Ozark National Scenic Riverways in the State of Missouri, and for other purposes," approved on August 27, 1964 (78 Stat. 608; 16 U.S.C. 460m), is amended by inserting language which provides for the protection and preservation of free-roaming horses. Removal of any free-roaming horse from the Ozark National Scenic Riverways will not be allowed except in the case of medical emergency or natural disaster.

- **H.R. 321 To deem the Florida Panther to be an endangered species under the Endangered Species Act of 1973.**

Introduced January 4, 1995, by Bill McCollum (R-FL) and referred to the Committee on Resources.

Under this law, the Secretary of the Interior shall include the species known as the "Florida Panther" in the list published under section 4(d) of

the Endangered Species Act of 1973 (16 U.S.C. 1533 (d)).

● **H.R. 39 To amend the Magnuson Fishery Conservation and Management Act to improve fisheries management.**

Introduced January 4, 1995, by Don Young (R-AK) and referred to the Committee on Resources. This act may be cited as the "Fishery Conservation and Management Amendments of 1995."

The Congress finds that the continuing loss of essential fishery habitat poses a long-term threat to the viability of commercial and recreational fisheries of the United States. To conserve and manage the fishery resources of the United States, increased attention must be given to the protection of this habitat.

These amendments also give additional regulatory authorities to the Secretary [of Commerce] over foreign fishing in U.S. waters and transshipment by foreign vessels of fish caught in U.S. waters. Under section 6, the Secretary shall submit an annual report to Congress listing those nations whose nationals or vessels conduct, and of those nations that authorize their nationals to conduct, large-scale drift net fishing beyond the exclusive economic zone of any nation in a manner that diminishes the effectiveness of any international agreement governing large-scale drift net fishing to which the United States is a party. Section 9 requires that fishery management plans contain a description of essential fishery habitat for the fishery and conservation and management measures necessary to minimize adverse impacts on that habitat caused by fishing. It also calls for the inclusion of a measurable and objective determination of what constitutes overfishing in that fishery, and a rebuilding program in the case of a plan for any fishery which the Council or the Secretary has determined is overfished.

103rd Congress

● **H.R. 5056 To amend the Federal Food, Drug, and Cosmetic Act to allow licensed veterinarians to order the extra-label use of drugs in animals, and for other purposes.**

Introduced September 19, 1994, by Charles Stenholm (D-TX) and referred to the Committee on Energy

and Commerce. Referred to the Subcommittee on Health and the Environment on September 20, 1994. This act may be cited as the "Animal Drug Amendments of 1994."

The Federal Food, Drug, and Cosmetic Act (21 U.S.C. 360b(a)) is amended to include the following new paragraphs: If approval of an application is filed with respect to a particular use or intended use of a new animal drug, the drug shall not be deemed unsafe with respect to a different use or intended use of the drug, other than a use in or on animal feed, if such use is by the lawful written or oral order of a licensed veterinarian within the context of a veterinarian-client-patient relationship. Different use of an animal drug shall not be permitted if the labeling of another animal drug contains the same active ingredient, same dosage form, and concentration.

If the Secretary [of Health and Human Services] finds that there is a reasonable probability the use of an animal drug may present a risk to public health, the Secretary may establish a safe level of residue of an animal drug when it is used for a different use and require practical, analytical methods for the detection of residues above the established safe level.

● **S. 2522 To amend the Federal Humane Methods of Livestock Slaughter Act to authorize the Secretary of Agriculture to regulate the commercial transportation of horses for slaughter, and for other purposes.**

Introduced October 6, 1994, by Mitch McConnell (R-KY) and referred to the Committee on Agriculture, Nutrition, and Forestry. This act may be cited as the "Humane and Safe Commercial Transportation of Horses for Slaughter Act of 1994."

Section 2 of the act of August 27, 1958 (U.S.C. 1901-1906), is amended by inserting the following: In order to ensure that horses sold for slaughter are provided humane treatment and care, it is essential to regulate the transportation, care, handling, and treatment of horses. The Secretary of Agriculture shall promulgate standards to govern the humane commercial transportation of horses for slaughter. Standards shall include minimum requirements with respect to humane handling, care, treatment, and equipment necessary to ensure

the safe and humane transportation of horses for slaughter.

At a minimum, standards will include the following: no horse shall be transported more than 24 hours without rest for at least 8 consecutive hours and given access to adequate quantities of food and potable water; vehicles shall provide headroom of at least 6 feet, 6 inches from roof; vehicle interiors shall be free of protrusions and sharp edges or objects, all ramps and floors shall be covered with a nonskid surface, and shall be maintained in a sanitary condition; vehicles shall provide adequate ventilation and shelter from extremes of weather and temperature; no horse shall be transported for slaughter if it is found, on pre-shipment inspection, to be in imminent danger of death, suffering from a broken or dislocated limb, unable to bear weight on all four limbs, blind in both eyes, or obviously suffering from severe illness, injury, or lameness that would make the animal unable to withstand transportation stress.

● **S. 2512 To require the Secretary of Agriculture to issue an order to establish a Thoroughbred horse industry promotion program, and for other purposes.**

Introduced October 6, 1994, by Mitch McConnell (R-KY) and referred to the Committee on Agriculture, Nutrition, and Forestry. This act may be cited as the "Thoroughbred Horse Industry Promotion and Research Act of 1994."

Congress finds that the breeding, buying, selling, training, and racing of Thoroughbred horses are significant components of agriculture in the national economy because: Thoroughbred horses are bred and raised by thousands of individual breeders, families, farmers, ranchers, owners, and other horse enthusiasts that employ tens of thousands of agriculture workers on farms, at training centers, sales venues, and racetracks; Thoroughbred horses are bought and compete in interstate and foreign commerce; racing and parimutuel wagering on Thoroughbred horses are televised and simulcast throughout the United States and the world; the history and traditions of Thoroughbred horse breeding and racing trace to colonial times and are worthy of preservation; preservation and promotion of the Thoroughbred horse industry is necessary to ensure rural green spaces, farms, and other agribusiness entities;

Thoroughbred horses are a valuable media of international exchange because the United States is the leading source of top-quality blood stock in the world.

- **Public Law 103-407 To enable producers and feeders of sheep and importers of sheep and sheep products to develop, finance, and carry out a nationally coordinated program for sheep and sheep product promotion, research and information, and for other purposes. This act may be cited as the "Sheep Promotion, Research, and Information Act of 1994."**

Signed into law on October 22, 1994.

Congress finds that: sheep and sheep products are important goods; the production of sheep and sheep products plays a significant role in the economy of the United States; sheep products must be of high quality, readily available, handled properly, and marketed efficiently; the maintenance and expansion of existing markets and development of new markets for sheep and sheep products are vital to the welfare of sheep producers; State organizations exist that conduct sheep and sheep product promotion, research, and industry and consumer education programs that are invaluable in promoting the consumption of sheep and sheep products; the cooperative development, financing, and implementation of a coordinated national program of sheep and sheep product promotion, research, consumer information, education, and industry information are necessary to maintain and expand existing markets and develop new markets. Related bills H.R. 5183 and S. 2500.

- **H.R. 5073 To amend the Endangered Species Act of 1973 to ensure that constitutionally protected private property rights are not infringed until adequate protection is afforded by reauthorization of such act. To protect against and compensate for economic losses from critical habitat designation, and for other purposes.**

Introduced September 22, 1994, by Lamar Smith (R-TX) and referred to the Committee on Merchant Marine and Fisheries. Referred to the Subcommittee on Environment and

Natural Resources on September 27, 1994. This act may be cited as the "Farm, Ranch, and Homestead Protection Act of 1994."

Section 4(a) of the Endangered Species Act of 1973 (16 U.S.C. 1533 (a)) is amended to place a moratorium on the designation of a species as endangered or threatened and on the designation of critical habitat. Further amendments include compensation by the Secretary of the Interior to any person or entity for any loss in market value of property as a result of the property being designated as critical habitat provided the property is not owned by the Federal Government. Related bills S. 2451 and H.R. 5144.

- **H.Res. 529 To affirm the Nation's tradition of hunting on wildlife refuges.**

Introduced August 21, 1994, by Pat Williams (R-MT) and referred to the Committee on Merchant Marine and Fisheries. Referred to the Subcommittee on Environment and Natural Resources on August 23, 1994.

The National Wildlife Refuge System Administration Act explicitly authorized the Secretary of the Interior to permit recreational hunting on national wildlife refuges. Recreational hunting is a traditional public use of wildlife refuges enjoyed by millions of Americans. Recreational hunters provide vital funds for refuge acquisition through duck stamp purchases and other means. Recreational hunting is an important management tool for maintaining certain wildlife populations and protecting biodiversity. Some people for ethical reasons would prohibit appropriate and sometimes necessary recreational hunting on refuges and other public lands. Be it resolved, that the Congress of the United States recognizes the need for and desirability of recreational hunting and fishing on national wildlife refuges.

- **H.R. 4848 To control crime.**

Introduced July 28, 1994, by Jay Dickey (R-AR) and referred to the Committee on the Judiciary. Referred to the Subcommittee on Crime and Criminal Justice on August 18, 1994. This act may be cited as the "People's Protection Crime Control Act of 1994."

Title XI outlines penalties for harassment or obstruction of lawful hunting. Title XI may be cited as the

"Recreational Hunting Safety and Preservation Act of 1994."

Congress finds that: recreational hunting is a necessary and beneficial element in the proper conservation and management of healthy, abundant, and biologically diverse wildlife resources; recreational hunters are a valuable asset in ensuring enlightened public input into decisions regarding management and maintenance programs for wildlife resources and habitat; recreational hunting supports industries highly significant to the national economy; and Federal excise taxes provide a major source of funding for vital programs of wildlife conservation and management.

Persons engaging in disruptive activities with the purpose of preventing and interfering with the conduct of lawful recreational hunting in Federal lands place both recreational hunters and the disruptive persons in imminent jeopardy of grave physical injury or death. Activities which disrupt peaceful, lawful, and prudent conduct of wildlife population and habitat management programs by Federal and State wildlife management agencies may result in undesirable patterns of activity within populations of wildlife, endangerment of the future viability of wildlife species, and damage to habitat values. Sections 1104 and 1105 outline violation and penalties for obstructing, impeding, or interfering with a lawful hunt.

- **S.2400 To establish the Northern Yukon-Arctic International Wildlife Refuge, and for other purposes.**

Introduced August 17, 1994, by William Roth (R-DE) and referred to the Committee on Environment and Public Works. This act may be cited as the "Northern Yukon-Arctic International Wildlife Refuge Act."

The Northern Yukon-Arctic International Wildlife Refuge is established: for the purposes of permanently protecting the undisturbed condition of the only complete spectrum of Arctic ecosystems in North America; in fulfillment of the responsibility of humans as stewards of the land; for permanently protecting all wild bird resources native to North America that are in an unconfined state and that are protected under the Migratory Bird Treaty Act (16 U.S.C. 703 et seq.); and for the purpose of maintaining a commitment to the permanent protection of marine mammals and fish species. ■

The NIH/NCRR/ARTI Survey Of Animal Use: What It Can Do For You

by
Tim Allen
Animal Welfare Information Center

In early 1995, Advanced Resource Technologies, Inc. (ARTI), under contract with the National Center for Research Resources (NCRR), National Institutes of Health (NIH), will undertake the most ambitious survey of laboratory animal use in the United States in the last 16 years. This survey will be mailed to all institutions that have animal use assurance statements on file with the Public Health Service. It is intended to provide the NIH with a current picture of laboratory animal use and projected animal research needs. These data will then be used to help NIH obtain funding for many of its extramural grants programs that aid the animal research community.

The survey covers many topics such as the nature of the organization, personnel, projected needs to support the animal research program, training, animal numbers by species and sex, conventional vs. nonconventional animals, facilities and the impressions of those filling out the document. It is 25 pages long.

According to Dr. Leo Whitehair, Director of the Comparative Medicine Program at the NIH, "The last national survey, in 1978-79, gave us quite a bit of information. There were estimates made of space needs for laboratory animals, anticipated costs for the construction, alteration or renovation of laboratory animal facilities and we obtained a good bit of information about the species being used. We hope to obtain similar up-to-date information with this survey." The 1978-79 survey was also used to build congressional support for the needs of laboratory animals. "What it did was give NCRR the necessary in-

formation for our director to go before the Appropriations Committees of the House and Senate and provide accurate responses to their questions concerning the national needs for new construction and renovations of existing [laboratory animal] facilities," said Dr. Whitehair. "The problem is that the '78 survey is outdated and that information means nothing today."

In recent years, when NCRR officials responded to congressional committees questions concerning laboratory animal needs, it became apparent that a serious lack of current information existed. Dr. Whitehair stressed that the 1995 survey results will help NIH immensely in planning its laboratory animal programs and in the submission of realistic budget requests for programs of construction, equipment procurement, and other animal needs.

Because of rising costs and changes in Federal grants management, the survey will also give a better picture of current costs associated with animal facility operations. Back in 1980, the Comparative Medicine Program estimated that approximately 12 to 15 percent of the average research budget was spent on animals. "However," says Dr. Whitehair, "per diem rates (direct costs) are going up very significantly at many institutions. Direct costs and indirect costs are a big factor because of Office of Management and Budget (OMB) Revised Circular A-21 that recently changed the way that certain types of services are charged at research institutions. This has been very difficult



for veterinarians in charge of research animal facilities because they have had to revise their per diem rates upward rather quickly. The Circular A-21 provision directs that many items previously covered by indirect costs now be shifted to direct costs. This does not please the investigator because the direct costs in grants are what the investigator actually sees and has to conduct the research project. Per diems are going up and they will be paid out of direct costs that are awarded in their grants." "The survey," adds Dr. Elizabeth Gard, a laboratory animal veterinarian at ARTI, "looks at per diem rates generated by an organization in supporting animals and will give us an idea of the real cost of animal research to the overall organization budget."

If you are a PHS assured institution, why should you spend the time filling out another government report? Can't NIH get their information from the annual U.S. Department of Agriculture (USDA) report? "No," according to Dr. Whitehair. "It's not the same approach to answering the questions that we're asking. Just numbers is one thing, but it doesn't really tell us what our needs are from a programmatic point of view about laboratory animal usage, facility needs, and projected costs of the overall resources." And says Dr. Richard Dukelow, Director of the Regional Primate Research Centers Program at NCRR, NIH, "The USDA report doesn't cover people and this survey will."

NATIONAL SURVEY

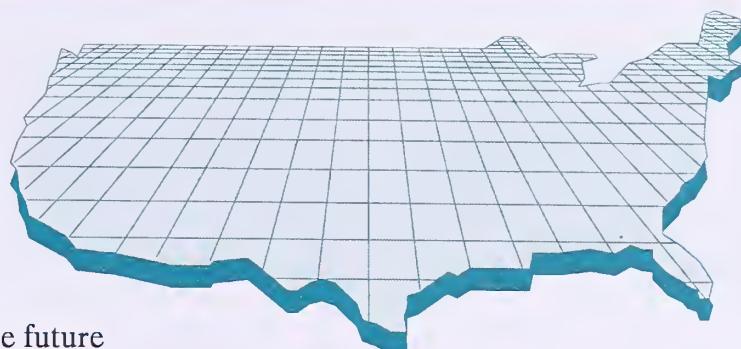
Dr. Gard also points out that this survey "looks for the first time at rats, mice, birds, invertebrate animals, newly emerging models used as alternatives, the use of farm animals, and at species the USDA tracks, but in a more comprehensive fashion. We are examining nonhuman primates (NHP) by species and this will give the Government an opportunity to look at supported resources and the projected needs of animal models that are different for differing NHP species." Dr. Whitehair also mentions that the NIH captive breeding programs of NHP may also be affected by the survey results.

A side benefit brought up by Dr. Dukelow is that many institutions probably have not fully examined their programs in such a comprehensive manner. "Oftentimes an institution doesn't have to really look at how many square feet, how many cages, how many animals they have. This provides them the opportunity to reevaluate their own systems and see what their long term needs really are."

For those people concerned about security, Dr. Paul DiTullio, a research psychologist working for ARTI, says that the survey is being conducted in a completely anonymous manner despite the many statistical problems this presents. "We are very aware of the institutions' concerns, so the tradeoff is

anonymity." Once the final report is issued, all survey booklets will be destroyed.

It's fair to say that the overall document will only be as valid and effective as the respondents contributions. Because future funding of grants for laboratory animal resources may be partially based on the survey results, it is in the best interests of everyone involved for those people receiving this document



to spend the time and provide ARTI with comprehensive evaluations of their laboratory animal programs. ■

WHO'S CONDUCTING THE SURVEY

Advanced Resources Technologies, Inc. (ARTI), a private company located in Alexandria, VA, has been contracted by the National Center for Research Resources (NCRR), National Institutes of Health (NIH) to administer the U.S. Public Health Service National Survey of Laboratory Animal Use, Facilities, and Resources. According to Dr. Leo Whitehair, ARTI was selected based on its expertise in survey design and administration and to lend reliability and credibility to the survey.

Dr. Elizabeth Gard, DVM, ACLAM, and Dr. Paul Ditullio, Ph.D., will be administering the survey for ARTI.

Dr. Gard is a diplomate of the American College of Laboratory Animal Medicine and has over 17 years' experience with both commercial and Federal Government laboratory animal facilities.

Dr. DiTullio has a doctorate in experimental psychology and has more than 17 years' experience performing surveys for the Federal Government. He will be responsible for the statistical analysis of the survey.

FACTS ABOUT THE NIH/NCRR/ARTI SURVEY

- Administered by Advanced Resources Technologies, Inc. under contract to the National Center for Research Resources, National Institutes of Health.
- Results will be used by NCRR, NIH and will affect future Federal funds for laboratory animal resources.
- The survey is being conducted to ensure anonymity of all respondents
- All PHS assured institutions will receive a copy of the survey.
- All PHS assured institutions will receive a copy of the final report.
- Topics covered by the survey include:
 - organization type
 - animal facility resources and uses
 - animal facility personnel
 - physical plant
 - animal care costs
 - your comments about the survey
- All survey booklets will be destroyed at the conclusion of the project.



Announcements...

• New Scaw Conference Proceedings

Research Animal Anesthesia, Analgesia and Surgery (A.C. Smith and M.M. Swindle, eds.) is the proceedings of a conference held by the Scientists Center for Animal Welfare (SCAW) in Atlanta, Georgia, on May 12-13, 1994. Topics include:

- American Society of Laboratory Animal Practitioners' Guidelines
- surgical training and personnel qualifications
- laparoscopic surgery courses
- ethics and science of xenotransplantation and xenoperfusion
- post-surgical care
- and many others.

The 170-page document is available for \$55 from SCAW, Golden Triangle Building One, 7833 Walker Dr., Suite 340, Greenbelt, MD 20770.

• "Call For Papers" For JAAWS: A Major New Animal Welfare Journal

The Journal of Applied Animal Welfare Science (JAAWS) is issuing a call for papers. Conceived to promote the emerging field of animal welfare science, the goal of the journal is to publish articles and reports on methods of experimentation, husbandry, and care that demonstrably enhance the welfare of animals. The first volume of JAAWS will be available January 1996 and thereafter on a quarterly basis. JAAWS will replace Humane Innovations and Alternatives, the eighth and final volume of which was published in 1994.

A co-project of the Association of Society for the Prevention of Cruelty to Animals (ASPCA) and Psychologists for the Ethical Treatment of Animals (PSYeta), JAAWS will consider manuscripts in four broad areas of animal welfare science. Formats include empirically based reports and invited or submitted articles and accompanying commentaries. Section editors for the four content areas covered by the journal are:

David B. Morton, Laboratory Animals
Joy A. Mench, Farm Animals
James A. Serpell, Companion Animals
Marc Bekoff, Wildlife/Zoo

A special inaugural issue of JAAWS will be published in the fall of 1995. It will begin a series of critical reviews of the four content areas, making suggestions for needed and more effective research. It will be available for a modest fee, and free with the purchase of a subscription to Volume 1.

For information on submissions and subscriptions, write to:

Kenneth Shapiro, Ph.D., PSYeta, P.O. Box 1297, Washington Grove, MD 20880 (e-mail: kshapiro@cap.gwu.edu) or Stephen Zawistowski, Ph.D., ASPCA, 424 East 92nd St., New York, NY 10128.

• Bat Care

The Maintenance of Bats in Captivity, by Susan M. Barnard of Zoo Atlanta, is a manual that details the captive care of both native and exotic bat species. It includes successful methods for hand-raising infant fruit, vampire, and insectivorous bats. Also included is information on bat rehabilitation, transportation, environment, housing, nutrition, medical, and necropsy considerations. The 104-page illustrated volume is available for \$9.95 (U.S.); Canada and Mexico, \$10.75 surface rate or \$11.50 air mail; other countries, \$13 surface rate or \$17 air mail from the author at: 6146 Fieldcrest Dr., Morrow, GA 30260.

• Wanted: Surplus Lab Equipment For Developing Countries

The Tufts Veterinary School International Department sends out several students each year to set up laboratories in developing countries. These labs are used for diagnosing and treating animals as part of wildlife conservation and development projects. Very few resources are available in these countries, and donations of equipment can make a huge difference in the quality of life for both animals and people. Surplus equipment currently needed include (but are not limited to) microscopes (electric lighting and mirror), computers (IBM or Macs), printers, table top centrifuges, small refrigerators, electric and balance scales, glassware, and pipetters. The Tufts Veterinary School will pay for all shipping costs. If you have any surplus equipment, contact Ellen Messner by e-mail: emessner@opal.tufts.edu, by phone: (508) 839-5395, ext. 4767, or at this address:

International Department, Tufts Veterinary School, 200 Westboro Rd., North Grafton, MA 01536.

• Dog Behavior Workshops

The Center for Applied Animal Behavior is sponsoring two dog behavior workshops in 1995. *Dr. Dunbar's 5th Annual Puppy Training Instructor's Workshop* will be held at the Central Florida Fairgrounds in Orlando on May 12-14. *Dr. Dunbar's 5th Annual Dog Behavior and Training Course: Canine Aggression, Biting and Fighting* will be held on June 23-25 at A Better Companion Dog Training Center in Houston, Texas. For more information about either workshop, contact Jean Farquhar or Sandra Thompson at (510) 658-8588.

• Workshop On Internal Audits Of The Animal Care And Use Program

The National Institutes of Health, Office for Protection from Research Risks (OPRR), will co-sponsor the workshop *Internal Audits of the Animal Care and Use Program* with the Medical School of Georgia and Albany State College on September 14-15, 1995, in Augusta, Georgia. The theme of the workshop will address processes whereby Institutional Animal Care and Use Committees (IACUC) can effectively evaluate their institution's animal care and use program.

Other issues to be included are veterinary care; the animal environment; and record, facility, and program reviews. For additional information, contact: Roberta Sonneborn, Office for Protection from Research Risks, Division of Animal Welfare, Building 31/Room 5B63, Bethesda, MD 20892, Tel: (301) 496-7163, Fax: (301) 402-2803.

● Prosimian Conference

An international conference and workshop on the biology and conservation of prosimians will be held September 14-16, 1995, at the North of England Zoological Society in the United Kingdom. The conference, co-sponsored by the University of Liverpool, The European Federation for Primatology, The Primate Society of Great Britain, and the Jersey Wildlife Preservation Trust, aims to promote *in situ* and *ex situ* conservation of primates through exchange of relevant research information on their general biology, ecology, behavior, geographic distribution, and conservation status in the wild. Conservation workshops will concentrate on applying this information to the development of practical action plans, management projects, skills and strategies including programs for breeding and reintroduction with attention to pre-release behavioral enrichment and genetic assessment. For more information, contact: Dr. Gordon Reid, Curator in Chief, North of England Zoological Society, Caughall Road, Upton by Chester, CH2 1LH or Robin Crompton by e-mail: rhcromp@liverpool.ac.uk.

● SCAW/AVMA Zoo And Aquaria Conference

The Scientists Center for Animal Welfare (SCAW) and the American Veterinary Medical Association (AVMA) are sponsoring an international conference on *The Well-being of Animal Research Models in Zoos and Aquaria* on May 8-9, 1995, in New Orleans, Louisiana. Session topics will include:

- how are research concerns different in zoos and aquaria?
- ethical dilemmas for conservation research
- trends in environmental enrichment
- the role of the institutional animal care and use committee at zoos and aquaria.

For more information, contact: SCAW, 7833 Walker Dr., Suite 340, Greenbelt, MD 20770, Tel: (301) 345-3500, Fax: (301) 345-3503.

● Summer Course On Ethical Issues Of Animal Research

This course will be held June 24 -29, 1995, at Georgetown University, Washington, D.C. The course is open to college faculty and others who would like to improve their skills in teaching ethical issues surrounding the use of animals as research subjects. Emphasis will be on how to use this course material in classroom instruction.

Topics include the moral status of non-human animals, the justification for using animals as experimental subjects, ethical concerns about vulnerable subjects, student objections, the use of alternatives, animal harms and pain, legal issues, and the importance of species. Varying points of view will be

presented in a well-balanced fashion. The course directors are F. Barbara Orlans, PhD, and Tom L. Beauchamp, PhD, both of the Kennedy Institute of Ethics, Georgetown University. For more information: contact Moheba Hanif, Kennedy Institute of Ethics, Georgetown University, Washington, DC, 20057, Tel: (202) 687-6833, Fax: (202) 687-8089, e-mail: hanifm@guvax.georgetown.edu.

● Change Of Address For OPRR

The address for the Office for Protection from Research Risks (OPRR) has changed to:

National Institutes of Health
Office for Protection from Research Risks
6100 Executive Boulevard, MSC 7507
Rockville, MD 20892-7507

You will note that a Mail Stop Code (MSC) and corresponding nine-digit zip code have been added to facilitate delivery of U.S. Postal Service mail. The address for express or hand-delivered mail is:

National Institutes of Health
Office for Protection from Research Risks
6100 Executive Boulevard, Suite 3B01
Rockville, MD 20892

● Animals In Science Conference

Monash University in Melbourne, Australia, is organizing a conference on "Animals in Science --Perspectives on Their Use, Care and Welfare" to be held on April 19-21, 1995. On Saturday, April 22, there will be an "Open Half Day" with short presentations on a range of topics of interest to high school teachers, students, and interested members of the public.

Topics will include:

- ethics, welfare and money
- validity of animal models to humans (yes/no/maybe)
- where do we draw the line
- training, techniques and welfare
- getting the numbers right - practical statistics
- analgesia, anesthesia, surgical techniques
- adjuncts and alternatives in research
- Electronic Zoo: e-mail and networking
- assessment of animal welfare in lab animals
- recognition of pain and distress
- achieving innovation in lab animal care
- and much more.

Running concurrently on Friday, April 21, is a session on "Partial or Total Replacement of Animals in Teaching" and a workshop on the "Development and Validation of Replacement of Animals in Teaching." These sessions will end with a talk on "What Now? Where To From Here?"

Visiting speakers include David Morton (University of Birmingham), Michael Balls (ECVAM), Vera Baumans (University of Utrecht), and Ken Boschert (COMP MED, Washington University).

For more information contact: Noel Johnston, Executive Officer - Animal Ethics, Research Ethics Unit, Monash University, Clayton, Victoria 3168 Australia. Tel: +61 3 905 3037, Fax: +61 3 905 3866, e-mail: noel.johnston@adm.monash.edu.au.

• Psychological Well-being Of Nonhuman Primates

The Institute of Laboratory Animal Resources' (ILAR) Committee on Psychological Well-being of Nonhuman Primates is in the final stages of preparing a report that will: evaluate environmental variables that are most influential in affecting the well-being of nonhuman primates; evaluate behavioral and physiological measures which are objective indices of the effects of these environmental variables; produce recommendations and procedures for use by institutions in developing plans consistent with Federal law and; suggest priorities for future research. Publication is expected in spring 1995. For more information contact Mara Aimone at (202) 334-2590.

• The October 1994 Zoological E-mail Directory Is Now Available

Thanks to the kindness of Duncan Bennett of the World Conservation Monitoring Centre, this directory is now available in a keyword search format on the World Wide Web. The location is <http://www.wcmc.org.uk/infoserv/zoodir.html>. Text version updates may be obtained by ftp at [ftp.wcmc.org.uk/pub/docs](ftp://ftp.wcmc.org.uk/pub/docs). Check out all of the WCMC's great information resources. (If you have a web site and could point to this list, it would be greatly appreciated.)

Who is included:

- zoo and aquarium employees
- veterinarians (exotics)
- wildlife rehabilitators
- educators in animal related studies
- researchers associated with one of the following:
 - * zoo or aquarium
 - * animal-related association or society
 - * university, academy, or college

If your work fits into one of the above categories and you would like to be included in the directory, please send an e-mail message with a subject line of "zoo list entry" and the following information to tpolk@indy.net. Please include your name, title, institution, animals worked with (if applicable), other notes (please keep brief), and your Internet address. If you do not have access to the WWW or FTP, send a mail message with a subject line of "send zoo list" and you will receive a copy of the directory.

• Brainstorm Neuroanatomy

BrainStorm is an interactive multimedia atlas of neuroanatomy for medical and graduate students, and for review of basic science by medical or scientific professionals. It incorporates magnified myelin-stained cross-sections, labelled and annotated with comprehensive references to color dissections, interactive diagrams, and descriptive text.

The product is available as a single-user license for \$500 and as a multi-user site license (up to 20 users) for \$1,000. The system requires a color Macintosh™ with a 13" or larger screen, 5 mBytes RAM and system version 6.0.4 or later.

For more information or ordering, write OTL, Mail Code 1850, 900 Welch Road, Suite 350, Stanford University, Stanford, CA 94304-1850 or call Stanford Office of Technology Licensing at (415) 723-0651.

• Bibliography On Farm Animal Husbandry And Medicine Available

Compiled by Thane Johnson, Volunteer, Sacramento Zoo, this bibliography is designed to give keepers, curators, volunteers, and others involved in the care of farm animals an introduction into the large volume of literature dealing with farm animals.

It is available from AWIC, or please send a No. 10 self-addressed, stamped envelope (affix two first-class stamps) to the following address:

Thane Johnson
Keeper Aide, Sacramento Zoo
4561 Tippwood Way
Sacramento, CA 95842

• Tissue Bank For Developmental Disorders

The Mental Retardation and Developmental Disabilities (MRDD) branch of the National Institute of Child Health and Development (NICHD) has recently awarded two contracts entitled "Brain and Tissue Bank for Developmental Disorders" to the University of Miami and University of Maryland School of Medicine. The joint endeavor is seeking biopsy and autopsy tissue on selected disorders of the brain and nervous system. The disorders to be collected include but are not limited to chromosomal anomalies, inborn errors of metabolism, syndromes associated with developmental delay, and disorders of cerebral cortex and motor development, such as metabolic brain disorders, neurodegenerative diseases, anterior horn cell disease, muscular dystrophies, mitochondrial encephalomyopathies, tuberous sclerosis, neurofibromatosis, fragile X syndrome, and X-linked MR syndromes. Both of the banks will provide rapid autopsy service for procurement, processing, storage and dissemination of brain and other tissues, as well as tissue culture specimens on these disorders and selected controls.

The banks are designed to further and help develop research programs around the United States. State-of-the-art molecular analysis, neuropathological evaluation, and tissue culture samples (myoblasts, fibroblasts, lymphoblasts) are also available from autopsy and biopsy tissue. The services are operational on a 24-hour, 7-day-a-week basis. The principal purpose of this Bank is to provide tissue to researchers to further their research and research on the above-listed diseases. Specific requests related to tissue processing or other diseases can also be implemented. For more information and case enrollment, contact Stuart Stein, M.D., P.I., the University of Miami Brain and Tissue Bank 1-(800) 59-BRAIN, (305) 547-6586 or (305) 547-6834 or Dr. Ronald Zielke, P.I., University of Maryland, (410) 706-6911 or 1-(800) 847-1539.

Upcoming Meetings

Applied Research Ethics National Association (ARENA) - "Nuts and Bolts of IACUC Compliance," March 12, 1995. San Diego, CA. Contact: (617) 423-4112 - Joan Rachlin or Danielle Demko.

Public Responsibility in Medicine and Research - "Animal Care and Research: Challenges and Changes for the IACUC," March 13-14, 1995. San Diego, CA. Contact: (617) 423-4112 - Joan Rachlin or Danielle Demko.

NIH Workshop - "Humane Care and Treatment of Animals: Challenges and Changes for the IACUC," March 12-14, 1995. San Diego, CA. Contact: (301) 496-7163 - Roberta Sonneborn.

National Wildlife Federation, March 16-19, 1995. Washington, DC. Contact: (202) 797-6800.

Social Research Conference - "In the Company of Animals," April 6-8, 1995. New York, NY. Contact: (212) 229-5755 - Evelyn Roberts.

FASEB - Experimental Biology 95, April 9-13, 1995. Atlanta, GA. Contact: (301) 530-7010 or e-mail: eb@ns1.faseb.org.

Animals in Science - "Perspectives on Their Use, Care and Welfare," April 19-21, 1995. Melbourne, Australia. Contact: +61 3 905 3037 - Noel Johnston or e-mail: noel.johnston@adm.monash.edu.au.

Animal Behavior and the Design of Livestock and Poultry Systems: An International Conference, April 19-21, 1995. Indianapolis, Indiana. Contact: (607) 255-7654 - Leah Braithwaite or e-mail: braithwaitel@nccot2.agr.ca.

Animal Transportation Association, April 23-27, 1995. Paris, France. Contact: (903) 769-2267 - Cherie Derouin.

Scientists Center for Animal Welfare Meeting - "The Well-being of Animal Research Models in Zoos and Aquaria," May 8-9, 1995. New Orleans, LA. Contact: (301) 345-3500 - Lee Krulisch.

IACUC Committees - The Charge and the Challenge, May 19, 1995. Raritan, NJ. Contact: (908) 355-4456 - Jayne Mackta.

1995 Congress on In Vitro Biology - "Interplay of Cells With Their Environment," May 20-25, 1995. Denver, CO. Contact: (410) 992-0946 - Marietta Ellis.

American Society for Microbiology, May 21-25, 1995. Washington, DC. Contact: (202) 737-3600.

Society for Conservation Biology, June 7-11, 1995. Fort Collins, CO. Contact: (303) 491-6714 - Richard Knight.

American Dairy Science Association Annual Meeting, June 25-28, 1995. Ithaca, NY. Contact: (217) 356-3182 - Molly Kelley.

11th International Council for Laboratory Animal Science (ICLAS) and 25th SCAN-LAS Jubilee Conference on "Frontiers in Laboratory Animal Science," July 2-7, 1995. Helsinki, Finland. Contact: +358-0-191 7281, Fax: +358-0-191 7284 - Dr. Tarja Kohila, University of Helsinki, Laboratory Animal Center, POB 17 (Arkadiankatu 7), FIN-00014 University of Helsinki, Finland.

Letter to the Editor

I write in response to Dr. Neal Barnard's letter in the Winter 1994 issue (V.5 #3) about the statement from the Public Health Service, "The Importance of Animals in Biomedical Research," which appeared in the Summer 1994 issue (V.5 #2).

I agree with Dr. Barnard that the AWIC Newsletter serves an important function in disseminating information on animal welfare issues. I disagree with his conclusion that printing the PHS statement does not serve your readers well, because a) the PHS is an important part of the biomedical research endeavor in the United States, and b) the reasons stated by Dr. Barnard for his conclusions are deeply flawed.

Barnard claims that the statement, "virtually every medical achievement of the last century has depended directly or indirectly on research with animals," is false, because, he says, "the elucidation and clinical testing of risk factors for heart disease never depended upon use of animals in any way." In fact, virtually all of the methodologies used to evaluate cardiovascular function in persons whose risks are being assessed were developed and/or refined in animal experimentation. The extreme counter argument to Barnard's claim is, of course, that even circulation of blood was discovered in animals.

Barnard mentions in his letter a review article, unfortunately not referenced, which he claims shows progress in stroke research was impeded because of 25 drugs that reduced experimentally induced strokes in animals, none worked in humans. A cursory Medline search of *Stroke* for

the most recent 5 years failed to reveal a review article whose title or abstract suggested focus on interspecific variability of drug response or to support for Barnard's conclusion. What was immediately obvious from this search is that animal models of stroke have made and continue to make enormous contributions to an overall understanding of the biochemistry and pathophysiology of the disease, and to its diagnosis and treatment, including the selection, evaluation, and safety testing of promising pharmaceutical agents.

Dr. Barnard objects to the paragraph that said animal activists have disseminated misleading information, demonstrated against animal use, and committed acts of vandalism or terrorism. An additional specific objection is to the PHS claim, a very well documented claim, by the way, that the majority of physicians accept the necessity of animal experimentation. Barnard's objections may best be understood in the context of the fact that the American Medical Association chastised Dr. Barnard's group, the Physicians Committee for Responsible Medicine, which, in 1991, it labelled a pseudo-physicians group whose membership included less than 10% bona fide physicians, for misrepresenting the critical role animals play in biomedical research and education, and for irresponsible and potentially dangerous recommendations on health matters and concealing its true purpose as an animal "rights" organization.

Ronald M. McLaughlin, DVM
Director, Laboratory Animal Medicine
University of Missouri-Columbia

Animal Welfare Research at Purdue University

- Environmental Enrichment for Confined Sows (B. Ladd and J.L. Albright)

Sows in confined environments often develop stereotyped behaviors (i.e., sham chewing, bar biting) and are lethargic. These behaviors may indicate an inadequate environment, and enriching confined environments with appropriate substrates and objects have proven successful in reducing or eliminating stereotypic and destructive behavior in non-human primate and other animal species housed in laboratory settings. Upon introducing biologically relevant and artificial objects into confined gestation sow environments, sows become stimulated to perform active behaviors (rooting and exploration), and significant reductions in stereotyped and lethargic behavior were observed. Artificial objects (plastic balls, rubber hose) were not used by the sows; instead the sows chose to manipulate natural objects (peat, wood logs). Enriching the environments of confined pigs with biologically relevant stimuli allows the attainment of positive states of well-being by encouraging exploratory, active behaviors.

- Effects of Positive, Aversive, and Minimal Human Interaction With Confined Sows on Their Behavior and Reproduction (B. Ladd, J. Ladd, and J.L. Albright)

Sows in modern confinement facilities may have lowered or enhanced performance and well-being depending on the quality of interaction with stockpersons. An investigation into the effects of positive, aversive, and minimal contact with humans on sow reproduction and behavior was carried out to find answers. Sows receiving positive contact were much more calm, did not show fear or stress reactions when in the presence of the experimenters, and had more pigs born and weaned. Sows treated in an aversive manner, or receiving no contact, tended to exhibit fear and stress reactions and lowered reproduction when in the presence of the experimenters. Contact time was 3 minutes per week per sow throughout gestation. Eliminating aversive elements (loud voice, striking the backs of animals, quick movements with body and arms) and providing positive interaction (gentle scratching, quiet-confident voice, reserved body movement) in a consistent manner toward sows can lower their fear reactions to humans and enhance reproduction. Caretakers should also become familiar with individual sows and observe sows often, thus allowing preventative health management to occur.

USDA EEO Policy Statement

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